

# COUNTRY PROFILE SUPPLEMENT

TO THE

CDC ASSESSMENT OF RISKS TO THE GLOBAL POLIO ERADICATION  
INITIATIVE (GPEI) STRATEGIC PLAN 2010-2012

9-Nov-10

2010 Third Quarter

## Notes:

Please refer to the CDC Risk Assessment for details on the data sources.

Not all sub national results can be calculated for every country. When calculating the percent of states\province we limited the regions to those meeting the following criteria:

- Percent 0-dose and 4+ doses: states\prov. with  $\geq 15$  NPAFP cases, and a population of  $\geq 100,000$  under 15 year old children
- NPAFP rate: states\prov. with a population of  $\geq 100,000$  under 15 year old children
- Adequate stool: all states\prov. with at least 1 AFP case

Absence of independent monitoring data does not always indicate monitoring was not done; rather the data were not available at the time of this report. For countries such as Afghanistan, Pakistan, and Sudan the region shared limited IM data specific for the Major Process Indicators, these data are not shown here. Not all of the rounds, start dates, and OPV formulations could be verified.

Case data are shown through 30-September using laboratory data as of 2-November.

## Afghanistan

Total number of states \ provinces: 32

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 83% Pol3 83%

## Non Polio AFP Profile

Percent 0-dose (national) <b>0.9%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>100% (22 of 22)</b> % within acceptable range <b>100% (22 of 22)</b>
Percent 4+ doses (national) <b>94.4%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>86.4% (19 of 22)</b> % within acceptable range <b>90.9% (20 of 22)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
SNID-bOPV	24-Jan-10				
SNID-bOPV	14-Feb-10				
NID-bOPV	14-Mar-10				
NID-tOPV	03-May-10				
SNID-mOPV1	01-Jun-10				
SNID-bOPV	07-Jun-10				
SNID-bOPV	29-Jun-10				
SNID-bOPV	25-Jul-10				
SNID-mOPV1	05-Sep-10				

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	15	11	10	7	04-Sep-10
W1W3	1	1			28-Dec-09
W3	22	10	8	6	11-Apr-10
cVDPV2	1	1	3	3	02-Jul-10

Non Polio AFP data

NPAFP rate (national) <b>10.2</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>100% (31 of 31)</b> % within acceptable range <b>100% (31 of 31)</b>
% adequate stools (nat.) <b>93.1%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>96.9% (31 of 32)</b> % within acceptable range <b>100% (32 of 32)</b>

## Poliovirus History

The WPV1 viruses in Afghanistan for 2009 and 2010 represent an evolving transmission pattern. There were viruses from 5 genetic clusters isolated in 2009, while only two of these have been detected in Afghanistan in 2010. In contrast to earlier years, two of these genetic clusters are only represented by isolates that appear to be the result of importation from Pakistan and not continued transmission from earlier years. Two of the clusters represent indigenous transmission and are related to 2008 viruses detected in Afghanistan. The last cluster, which accounts for half of the cases, represents indigenous transmission, particularly in Helmand province, as well as some cross-border transmission with Pakistan in Kandahar province. The viruses in 2010 represent both a new importation from Pakistan and continued circulation of one cluster in the south. The WPV3 viruses in 2009 are from a single genetic cluster. Most of the isolates from this cluster are from chains of transmission that are only within Afghanistan, with only a few isolates related to viruses that are an indication of cross-border transmission. In 2010, two genetic clusters were observed. One represents continued circulation of the same cluster seen in 2009, but includes a likely importation from Pakistan of a different chain of transmission. The new cluster observed in 2010 is most closely related to viruses that caused a large outbreak in 2007 and were last seen in 2008 in southern Afghanistan and

**Afghanistan**Total number of states \ provinces: **32**

therefore represents undetected circulation for a period of at least two years. Based upon the close genetic linkage among many of the virus isolates, it is unlikely that there are significant missed chains of transmission in much of Afghanistan. However, a few isolates have less genetic linkage than expected, including an example of significant missed transmission, which is an indication that surveillance has gaps at the sub-national level.

**Data Completeness**

Percent of NPAFP cases with unknown age

**0%**

Percent of 6-35 month old NPAFP cases with unknown dose history

**0%**

## Angola

Total number of states \ provinces: 18

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 73% Pol3 73%

## Non Polio AFP Profile

<i>Percent 0-dose (national)</i> <b>9.4%</b>	<i>Percent states with &lt; 10% 0-dose NPAFP children</i> Non-adjusted <b>80% (4 of 5)</b> % within acceptable range <b>100% (5 of 5)</b>
<i>Percent 4+ doses (national)</i> <b>29.7%</b>	<i>Percent states with &gt; 80% 4+dose NPAFP children</i> Non-adjusted <b>0% (0 of 5)</b> % within acceptable range <b>20% (1 of 5)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

<i>Campaign type</i>  (mixed rounds abbreviated as: t, b, 1, 3)	<i>Start date</i>	<i>National indicator</i>		<i>Sub national indicator</i>	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
SNID-mOPV1	23-Apr-10	7.4	6.6	100% (1 of 1)	100% (1 of 1)
SNID-mOPV1	07-May-10	10.7	10.7	67% (4 of 6)	67% (4 of 6)
SNID-mOPV1	04-Jun-10	9.6	9.5	50% (1 of 2)	50% (1 of 2)
NID-tOPV	11-Jun-10	12.4	14.9	42% (5 of 12)	67% (8 of 12)
SNID-mOPV1	18-Jun-10	6.5	6.8	100% (1 of 1)	100% (1 of 1)
M.U.-mOPV1	17-Jul-10				
NID-bOPV	06-Aug-10	12.5	13.9	54% (7 of 13)	50% (6 of 12)
NID-bOPV	13-Aug-10	16.9	17.4	50% (1 of 2)	50% (1 of 2)

## Surveillance

Polio Cases (W1, W3, and VDPVs)

<i>Serotype</i>	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	29	10	25	14	20-Aug-10

## Non Polio AFP data

<i>NPAFP rate (national)</i> <b>3.6</b>	<i>Percent states with NPAFP rate &gt;= 2</i> Non-adjusted <b>88.9% (16 of 18)</b> % within acceptable range <b>100% (18 of 18)</b>
<i>% adequate stools (nat.)</i> <b>89.4%</b>	<i>Percent states with adequate stool proportion &gt;= 80%</i> Non-adjusted <b>100% (18 of 18)</b> % within acceptable range <b>100% (18 of 18)</b>

## Poliovirus History

The WPV1 viruses in Angola during 2009 and 2010 represented an outbreak resulting from importation from India in 2007. Only one genetic cluster has been observed. In 2009, most of the cases were distributed in the western part of the country and included moderate regional transmission. In 2010, cases were distributed more widely including the northeastern part of the country and included moderate regional transmission. The cases in 2010 represented continued circulation from 2009 and not a new importation and marked the third consecutive year of transmission of this virus. WPV1 and WPV3 related to earlier importation events were not observed in 2009 and 2010. Based upon multiple isolates from both 2009 and 2010 with less genetic linkage than expected, there is indication that surveillance may have gaps at the sub-national level.

## Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

7.9%

Benin

Total number of states \ provinces: 12

Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 83% Pol3 83%

Non Polio AFP Profile

Percent 0-dose (national) <b>4.3%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted % within acceptable range
Percent 4+ doses (national) <b>54.3%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted % within acceptable range

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	06-Mar-10	2.4		100% (11 of 11)	
NID-bOPV	24-Apr-10	2.9	6.9	100% (12 of 12)	67% (6 of 9)

Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	20	14			19-Apr-09

Non Polio AFP data

NPAFP rate (national) <b>2.7</b>	Percent states with NPAFP rate >= 2 Non-adjusted <b>75% (9 of 12)</b> % within acceptable range <b>91.7% (11 of 12)</b>
% adequate stools (nat.) <b>90.8%</b>	Percent states with adequate stool proportion >= 80% Non-adjusted <b>91.7% (11 of 12)</b> % within acceptable range <b>91.7% (11 of 12)</b>

Poliovirus History

The WPV1 viruses in Benin during 2009 represented mostly continuation of an outbreak that started in 2008. Two of the three clusters observed in 2008 have not been seen in Benin since then. The 2009 outbreak centered in southern Benin and was a cross-border outbreak with states in Southwestern Nigeria. The transmission likely included one or more additional importations, but also significant local transmission. One virus from Northeastern Benin represented a single importation event in 2009 with no evidence of subsequent local transmission. There was little indication of missed chains of transmission based upon the close genetic linkage among isolates.

Data Completeness

Percent of NPAFP cases with unknown age	<b>0%</b>
Percent of 6-35 month old NPAFP cases with unknown dose history	<b>11.9%</b>

## Burkina Faso

Total number of states \ provinces: 13

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 **82%** Pol3 **84%**

## Non Polio AFP Profile

Percent 0-dose (national) <b>1.7%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>100% (1 of 1)</b> % within acceptable range <b>100% (1 of 1)</b>
Percent 4+ doses (national) <b>85%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>100% (1 of 1)</b> % within acceptable range <b>100% (1 of 1)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	06-Mar-10	3.7		100% (13 of 13)	
NID-mOPV3	02-Apr-10	2.7		100% (13 of 13)	
NID-mOPV3	07-May-10	2.8	15.5	100% (13 of 13)	23% (3 of 13)
SNID-mOPV3	28-May-10	1.2	5.8	100% (7 of 7)	100% (7 of 7)
SNID-mOPV3	02-Jul-10	1.6	4.4	100% (7 of 7)	100% (7 of 7)

## Surveillance

## Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	15	11			25-Oct-09

## Non Polio AFP data

NPAFP rate (national) <b>4.5</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>100% (13 of 13)</b> % within acceptable range <b>100% (13 of 13)</b>
% adequate stools (nat.) <b>88.7%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>76.9% (10 of 13)</b> % within acceptable range <b>100% (13 of 13)</b>

## Poliovirus History

The WPV1 viruses in Burkina Faso during 2009 represent a complex pattern of transmission that includes continuation of outbreaks that started in 2008 as a result of at least two separate importations, as well as one or more additional importations or cross-border transmission in 2009. The viruses in 2009 were from two genetic clusters, both originating in 2008 as part of the larger outbreak in West Africa originating from viruses circulating in Nigeria. More detailed genetic analysis is needed to fully characterize this transmission in Burkina Faso and neighboring countries. The 2009 outbreak largely centered in central Burkina Faso and represented significant local transmission. Based upon the close genetic linkage among most of the virus isolates, it is unlikely that there are significant missed chains of transmission, however, a few isolates have less genetic linkage than expected, which is an indication that surveillance may have gaps at the sub-national level.

## Data Completeness

Percent of NPAFP cases with unknown age

**1.2%**

Percent of 6-35 month old NPAFP cases with unknown dose history

**6.3%**

# Burundi

Total number of states \ provinces: 17

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 92% Pol3 96%

### Non Polio AFP Profile

Percent 0-dose (national) <b>0%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted % within acceptable range
Percent 4+ doses (national) <b>2.6%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted % within acceptable range

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	2	1			12-Sep-09

Non Polio AFP data

NPAFP rate (national) <b>4.4</b>	Percent states with NPAFP rate >= 2 Non-adjusted <b>76.5% (13 of 17)</b> % within acceptable range <b>94.1% (16 of 17)</b>
% adequate stools (nat.) <b>78.3%</b>	Percent states with adequate stool proportion >= 80% Non-adjusted <b>47.1% (8 of 17)</b> % within acceptable range <b>82.4% (14 of 17)</b>

### Poliovirus History

The WPV1 viruses in Burundi during 2009 resulted from a single importation event from DRC. This virus in DRC represents continuation of an outbreak that started in 2006, following importation from Angola to DRC. The two cases in 2009 indicate only limited local transmission. Although data is limited, the close genetic linkage between the two viruses in Burundi and the genetic gap with earlier DRC viruses from 2008 give no indication of missed chains of transmission in Burundi, but most likely unobserved viruses in DRC.

### Data Completeness

Percent of NPAFP cases with unknown age

0.6%

Percent of 6-35 month old NPAFP cases with unknown dose history

24.3%

## Cameroon

Total number of states \ provinces: 10

### Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 80% Pol3 79%

#### Non Polio AFP Profile

Percent 0-dose (national) <b>4.5%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>66.7% (2 of 3)</b> % within acceptable range <b>100% (3 of 3)</b>
Percent 4+ doses (national) <b>46.4%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>0% (0 of 3)</b> % within acceptable range <b>0% (0 of 3)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
SNID-mOPV3	05-Mar-10	8.8	16.4	75% (3 of 4)	25% (1 of 4)
SNID-mOPV3	23-Apr-10	7.8	11.7	75% (3 of 4)	50% (2 of 4)
SNID-mOPV1	23-Jul-10	2.9	6	100% (1 of 1)	100% (1 of 1)
SNID-mOPV1	06-Aug-10	4.4	7.1	100% (1 of 1)	100% (1 of 1)

### Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W3	3	2			15-Oct-09

Non Polio AFP data

NPAFP rate (national) <b>2.9</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>80% (8 of 10)</b> % within acceptable range <b>100% (10 of 10)</b>
% adequate stools (nat.) <b>78%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>50% (5 of 10)</b> % within acceptable range <b>90% (9 of 10)</b>

#### Poliovirus History

The WPV3 viruses in Cameroon during 2009 represented two importation events from two neighboring countries with active WPV3 outbreaks in 2009. The viruses were from two distinct genetic clusters, one clearly related to circulation in parts of Central Nigeria and the second related to viruses in western Chad. The viruses from Chad indicate very limited local transmission (two cases). There was little indication of missed chains of transmission based upon the close genetic linkage among isolates.

#### Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

1.1%



# Central African Republic

Total number of states \ provinces: 7

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 54% Pol3 47%

### Non Polio AFP Profile

Percent 0-dose (national) <b>1.2%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>100% (1 of 1)</b> % within acceptable range <b>100% (1 of 1)</b>
Percent 4+ doses (national) <b>26.2%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>0% (0 of 1)</b> % within acceptable range <b>0% (0 of 1)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV3	05-Mar-10	9.8	13.6	50% (3 of 6)	33% (2 of 6)
NID-mOPV3	23-Apr-10	10.1	10.2	50% (3 of 6)	50% (3 of 6)

## Surveillance

Polio Cases (W1, W3, and VDPVs)

<i>Serotype</i>	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W3	14	1			09-Aug-09

Non Polio AFP data

NPAFP rate (national) <b>8.5</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>100% (6 of 6)</b> % within acceptable range <b>100% (6 of 6)</b>
% adequate stools (nat.) <b>91.1%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>71.4% (5 of 7)</b> % within acceptable range <b>85.7% (6 of 7)</b>

### Poliovirus History

The WPV3 viruses in Central African Republic during 2009 represented a very focal outbreak resulting from importation in early 2009, most likely from Chad. Only a single genetic cluster was observed. The 2009 outbreak centered in western Central African Republic and the virus was related to circulation in Chad in 2008 and more distantly related to circulation in parts of northern Nigeria in 2008 and 2009. The transmission likely represented only a single importation event, but with significant local transmission. The WPV1 virus imported from DRC has not been observed since 2008. There was little indication of missed chains of transmission based upon the close genetic linkage among isolates.

### Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

24.3%

## Chad

Total number of states \ provinces: 18

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 23% Pol3 36%

## Non Polio AFP Profile

Percent 0-dose (national) <b>11.7%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>100% (1 of 1)</b> % within acceptable range <b>100% (1 of 1)</b>
Percent 4+ doses (national) <b>44.2%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>0% (0 of 1)</b> % within acceptable range <b>0% (0 of 1)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-tOPV	10-Feb-10	15.3	25.8	33% (3 of 9)	12% (1 of 8)
NID-mOPV3	06-Mar-10		5.5		100% (1 of 1)
NID-mOPV3	24-Apr-10	8.9	11.3	69% (9 of 13)	54% (7 of 13)
SNID-mOPV3	03-May-10				
SNID-mOPV3	08-May-10				
SNID-mOPV3	30-May-10	6.5	16.3	100% (1 of 1)	0% (0 of 1)
NID-mOPV3	07-Jun-10	10.5	11.6	29% (2 of 7)	40% (2 of 5)
SNID-bOPV	26-Jul-10				
SNID-mOPV3	30-Aug-10	11.2	26.7	50% (1 of 2)	0% (0 of 1)
SNID-bOPV	14-Sep-10	15.4	17.8	0% (0 of 1)	0% (0 of 1)

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W3	64	29	14	9	10-May-10

## Non Polio AFP data

NPAFP rate (national) <b>5.1</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>100% (17 of 17)</b> % within acceptable range <b>100% (17 of 17)</b>
% adequate stools (nat.) <b>53.8%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>16.7% (3 of 18)</b> % within acceptable range <b>33.3% (6 of 18)</b>

## Poliovirus History

The WPV3 viruses in Chad during 2009 represented continuation of a large widespread outbreak resulting from importation in 2007. In addition, two single case importation events also occurred in 2009 from Nigeria. The 2009 viruses represent three genetic clusters. WPV3 viruses detected in 2010 represented continued circulation of the main cluster observed in 2009, as well as a single importation event from Nigeria with only a single case. These 2010 viruses represent two of the three genetic clusters observed in 2009. One of the outbreak clusters observed in Chad during 2008 that was subsequently imported into Central African Republic in 2009 has not been observed in Chad since 2008. Based upon several isolates with less genetic linkage than expected, there is some indication that surveillance may have gaps at the sub-national level.

## Data Completeness

Percent of NPAFP cases with unknown age

0.7%

Percent of 6-35 month old NPAFP cases with unknown dose history

8.2%

## Côte d'Ivoire

Total number of states \ provinces: 19

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 81% Pol3 77%

## Non Polio AFP Profile

Percent 0-dose (national) <b>3.9%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>66.7% (2 of 3)</b> % within acceptable range <b>100% (3 of 3)</b>
Percent 4+ doses (national) <b>34.6%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>0% (0 of 3)</b> % within acceptable range <b>0% (0 of 3)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	26-Mar-10	2.4	7.8	100% (19 of 19)	74% (14 of 19)
NID-mOPV1	23-Apr-10	2.4	4.9	100% (19 of 19)	95% (18 of 19)

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	26	19			06-Aug-09

Non Polio AFP data

NPAFP rate (national) <b>4</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>100% (19 of 19)</b> % within acceptable range <b>100% (19 of 19)</b>
% adequate stools (nat.) <b>77.1%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>63.2% (12 of 19)</b> % within acceptable range <b>68.4% (13 of 19)</b>

## Poliovirus History

The WPV1 viruses in Cote d'Ivoire during 2009 represented an outbreak resulting from one importation in 2008 and one or more additional importation events in 2009 that represent continuation of the large outbreak in West Africa that started in 2008. The outbreak in Ivory Coast represented extensive circulation in parts of the south and west of the country. The viruses are from two genetic clusters, with most of the cases in one cluster. The two cases in the minor cluster represent an importation from Burkina Faso in early 2009, with no evidence of continued circulation beyond the middle of the year. The 2009 importation events in the other genetic cluster are likely from Burkina Faso. Viruses from Ivory Coast were also the likely source for importations into Liberia and Guinea. Based upon the close genetic linkage among most of the virus isolates, it is unlikely that there are significant missed chains of transmission; however, a few isolates have less genetic linkage than expected, which is an indication that surveillance may have gaps at the sub-national level.

## Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

17.1%

## Democratic Republic of the Congo

Total number of states \ provinces: 11

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 77% Pol3 74%

## Non Polio AFP Profile

Percent 0-dose (national) <b>11.3%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>27.3% (3 of 11)</b> % within acceptable range <b>72.7% (8 of 11)</b>
Percent 4+ doses (national) <b>29%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>0% (0 of 11)</b> % within acceptable range <b>0% (0 of 11)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
SNID-mOPV1	04-Jun-10	5.8	11.3	50% (1 of 2)	50% (1 of 2)
SNID-mOPV1	18-Jun-10	12.5	5.9	0% (0 of 2)	100% (2 of 2)
SNID-tOPV,1	19-Aug-10	13.9	11.7	43% (3 of 7)	29% (2 of 7)
SNID-tOPV,1	23-Sep-10	9.7	16.3	56% (5 of 9)	33% (3 of 9)

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W3	3	2			24-Jun-09
cVDPV2	5	5	10	7	06-Sep-10
W1	0	0	30	10	13-Sep-10

Non Polio AFP data

NPAFP rate (national) <b>5.7</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>100% (11 of 11)</b> % within acceptable range <b>100% (11 of 11)</b>
% adequate stools (nat.) <b>78.9%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>45.5% (5 of 11)</b> % within acceptable range <b>72.7% (8 of 11)</b>

## Poliovirus History

The WPV3 viruses in Democratic Republic of Congo during 2009 represented both an additional case following an importation from Angola in 2008 and a new importation in 2009 from Angola with only very focal spread. Only a single genetic cluster was observed. The WPV1 viruses detected in 2010 represented three new importation events from Angola, with significant local circulation. In addition, one WPV1 represents continued circulation of virus that was last seen in eastern DRC in mid-2008. There was little indication of missed chains of transmission for the Kasai Occidental WPV1 viruses based upon the close genetic linkage among isolates; however, the large genetic distance of the Katanga virus indicates a significant surveillance gap, likely somewhere in eastern DRC.

## Data Completeness

Percent of NPAFP cases with unknown age

0.4%

Percent of 6-35 month old NPAFP cases with unknown dose history

10.6%

Eritrea

Total number of states \ provinces: 6

Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 99% Pol3 99%

Non Polio AFP Profile

Percent 0-dose (national) <b>0%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted % within acceptable range
Percent 4+ doses (national) <b>15.8%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted % within acceptable range

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house

Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	

Non Polio AFP data

NPAFP rate (national) <b>6.1</b>	Percent states with NPAFP rate >= 2 Non-adjusted <b>100% (5 of 5)</b> % within acceptable range <b>100% (5 of 5)</b>
% adequate stools (nat.) <b>98.9%</b>	Percent states with adequate stool proportion >= 80% Non-adjusted <b>100% (6 of 6)</b> % within acceptable range <b>100% (6 of 6)</b>

Poliovirus History

Data Completeness

Percent of NPAFP cases with unknown age	<b>0%</b>
Percent of 6-35 month old NPAFP cases with unknown dose history	<b>13.9%</b>

# Ethiopia

Total number of states \ provinces: 11

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 79% Pol3 76%

### Non Polio AFP Profile

Percent 0-dose (national) <b>8%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>83.3% (5 of 6)</b> % within acceptable range <b>83.3% (5 of 6)</b>
Percent 4+ doses (national) <b>23.3%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>0% (0 of 6)</b> % within acceptable range <b>0% (0 of 6)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
SNID-mOPV3	11-Jun-10	14.8	16.9	50% (2 of 4)	25% (1 of 4)
SNID-tOPV	05-Aug-10	8.4	10.8	100% (3 of 3)	67% (2 of 3)
SNID-tOPV	17-Sep-10	10.2	21.3	0% (0 of 1)	0% (0 of 1)

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
cVDPV2	1	1			16-Feb-09
cVDPV3	0	0	5	2	17-May-10

Non Polio AFP data

NPAFP rate (national) <b>3.2</b>	Percent states with NPAFP rate >= 2 Non-adjusted <b>80% (8 of 10)</b> % within acceptable range <b>80% (8 of 10)</b>
% adequate stools (nat.) <b>79.7%</b>	Percent states with adequate stool proportion >= 80% Non-adjusted <b>63.6% (7 of 11)</b> % within acceptable range <b>72.7% (8 of 11)</b>

## Poliovirus History

### Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

7.8%

**Gambia**

Total number of states \ provinces: 6

**Immunization**

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 98% Pol3 97%

**Non Polio AFP Profile**

Percent 0-dose (national) <b>0%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted % within acceptable range
Percent 4+ doses (national) <b>92.3%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted % within acceptable range

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

<i>Campaign type</i>  (mixed rounds abbreviated as: t, b, 1, 3)	<i>Start date</i>	<i>National indicator</i>		<i>Sub national indicator</i>	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	06-Mar-10	4.6	35.1	100% (6 of 6)	67% (4 of 6)
NID-mOPV1	24-Apr-10	1.9	5.5	100% (6 of 6)	100% (6 of 6)
NID-mOPV1	28-May-10	2.4	4.3	100% (6 of 6)	83% (5 of 6)
NID-mOPV1	25-Jun-10	2.7	5.5	100% (6 of 6)	100% (6 of 6)

**Surveillance**

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	

**Non Polio AFP data**

NPAFP rate (national) <b>4.8</b>	Percent states with NPAFP rate >= 2 Non-adjusted <b>100% (1 of 1)</b> % within acceptable range <b>100% (1 of 1)</b>
% adequate stools (nat.) <b>96.8%</b>	Percent states with adequate stool proportion >= 80% Non-adjusted <b>100% (6 of 6)</b> % within acceptable range <b>100% (6 of 6)</b>

**Poliovirus History**
**Data Completeness**

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

7.7%

# Ghana

Total number of states \ provinces: 10

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 94% Pol3 94%

### Non Polio AFP Profile

Percent 0-dose (national) <b>0%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>100% (2 of 2)</b> % within acceptable range <b>100% (2 of 2)</b>
Percent 4+ doses (national) <b>66.7%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>0% (0 of 2)</b> % within acceptable range <b>0% (0 of 2)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	05-Mar-10	4.6	2.5	100% (10 of 10)	100% (10 of 10)
NID-mOPV1	23-Apr-10	4.8	2.7	100% (10 of 10)	90% (9 of 10)

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	

Non Polio AFP data

NPAFP rate (national) <b>2.3</b>	Percent states with NPAFP rate >= 2 Non-adjusted <b>70% (7 of 10)</b> % within acceptable range <b>90% (9 of 10)</b>
% adequate stools (nat.) <b>78.1%</b>	Percent states with adequate stool proportion >= 80% Non-adjusted <b>60% (6 of 10)</b> % within acceptable range <b>90% (9 of 10)</b>

## Poliovirus History

### Data Completeness

Percent of NPAFP cases with unknown age

0.4%

Percent of 6-35 month old NPAFP cases with unknown dose history

3.3%



# Guinea

Total number of states \ provinces: 8

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 57% Pol3 53%

### Non Polio AFP Profile

Percent 0-dose (national) <b>1.1%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>100% (2 of 2)</b> % within acceptable range <b>100% (2 of 2)</b>
Percent 4+ doses (national) <b>49.5%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>50% (1 of 2)</b> % within acceptable range <b>50% (1 of 2)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	06-Mar-10	7.3	10.2	75% (6 of 8)	62% (5 of 8)
NID-mOPV1	27-Mar-10	0.2	1.9	100% (8 of 8)	100% (8 of 8)
NID-mOPV1	24-Apr-10	0.2	3.2	100% (8 of 8)	100% (8 of 8)
NID-mOPV1	28-May-10	0.1	1.5	100% (8 of 8)	100% (8 of 8)
NID-mOPV1	05-Jul-10	0.2	1.8	100% (8 of 8)	100% (8 of 8)

## Surveillance

### Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	42	19			03-Nov-09
cVDPV2	0	0			

### Non Polio AFP data

NPAFP rate (national) <b>4.1</b>	Percent states with NPAFP rate >= 2 Non-adjusted <b>100% (8 of 8)</b> % within acceptable range <b>100% (8 of 8)</b>
% adequate stools (nat.) <b>69.3%</b>	Percent states with adequate stool proportion >= 80% Non-adjusted <b>25% (2 of 8)</b> % within acceptable range <b>50% (4 of 8)</b>

### Poliovirus History

The WPV1 viruses in Guinea during 2009 represented an outbreak resulting from one or more importations events in 2009 that represent continuation of the large outbreak in West Africa that started in 2008. The outbreak in Guinea represented extensive circulation throughout large parts of the country. The viruses are all from a single cluster, with importations from Ivory Coast and/or Burkina Faso and evidence of limited cross-border transmission with Sierra Leone. Viruses from Guinea were also the likely source for importations into Sierra Leone, Mali, Senegal, and Liberia. The latter two events in 2010 highlight the possibility of virus circulation in 2009 having continued at least at a low level into 2010 in Guinea. Based upon the close genetic linkage among most of the virus isolates, it is unlikely that there are significant missed chains of transmission; however, a few isolates have less genetic linkage than expected, which is an indication that surveillance may have gaps at the sub-national level.

### Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

22.7%

Guinea-Bissau

Total number of states \ provinces: 9

Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 **68%** Pol3 **72%**

Non Polio AFP Profile

<i>Percent 0-dose (national)</i> <b>0%</b>	<i>Percent states with &lt; 10% 0-dose NPAFP children</i> Non-adjusted % within acceptable range
<i>Percent 4+ doses (national)</i> <b>100%</b>	<i>Percent states with &gt; 80% 4+dose NPAFP children</i> Non-adjusted % within acceptable range

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

<i>Campaign type</i>  (mixed rounds abbreviated as: t, b, 1, 3)	<i>Start date</i>	<i>National indicator</i>		<i>Sub national indicator</i>	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	06-Mar-10	4.7	8.5	86% (6 of 7)	80% (4 of 5)
NID-mOPV1	24-Apr-10	2.7	5	100% (7 of 7)	67% (4 of 6)
NID-mOPV1	28-May-10	1.9	0.8	100% (11 of 11)	100% (11 of 11)

Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	

Non Polio AFP data

<i>NPAFP rate (national)</i> <b>2.3</b>	<i>Percent states with NPAFP rate &gt;= 2</i> Non-adjusted <b>66.7% (2 of 3)</b> % within acceptable range <b>100% (3 of 3)</b>
<i>% adequate stools (nat.)</i> <b>66.7%</b>	<i>Percent states with adequate stool proportion &gt;= 80%</i> Non-adjusted <b>50% (2 of 4)</b> % within acceptable range <b>50% (2 of 4)</b>

Poliovirus History

Data Completeness

Percent of NPAFP cases with unknown age	<b>9.5%</b>
Percent of 6-35 month old NPAFP cases with unknown dose history	<b>0%</b>

## India

Total number of states \ provinces: 35

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 66% Pol3 67%

## Non Polio AFP Profile

Percent 0-dose (national) <b>0.3%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>100% (22 of 22)</b> % within acceptable range <b>100% (22 of 22)</b>
Percent 4+ doses (national) <b>95.9%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>100% (22 of 22)</b> % within acceptable range <b>100% (22 of 22)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-bOPV,1,3	10-Jan-10				
NID-bOPV,1,3	07-Feb-10				
SNID-mOPV1,3	07-Mar-10				
SNID-mOPV1	14-Mar-10				
SNID-mOPV1,t	21-Mar-10				
SNID-bOPV,1	25-Apr-10				
SNID-bOPV,1	23-May-10				
M.U.-mOPV1	13-Jun-10				
SNID-bOPV	20-Jun-10				
SNID-bOPV	27-Jun-10				
M.U.-mOPV1	11-Jul-10				
SNID-bOPV,1,3	18-Jul-10				
SNID-bOPV	08-Aug-10				
M.U.-bOPV,1	23-Aug-10				
M.U.-mOPV1	04-Sep-10				
M.U.-mOPV1,b	19-Sep-10				

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	79	34	16	7	16-Sep-10
W1W3	1	1			23-May-09
W3	661	47	23	12	31-Aug-10
cVDPV2	15	8	1	1	18-Jan-10

## Non Polio AFP data

NPAFP rate (national) <b>14.5</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>91.2% (31 of 34)</b> % within acceptable range <b>97.1% (33 of 34)</b>
% adequate stools (nat.) <b>83.5%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>79.4% (27 of 34)</b> % within acceptable range <b>91.2% (31 of 34)</b>

## Poliovirus History

The WPV1 virus in India during 2009 and 2010 represent an improving situation of endemic transmission. The viruses observed in 2009 represented continued transmission within a single genetic cluster primarily in two distinct geographic foci. In Uttar Pradesh, the virus represented continued circulation following the large outbreak following

**India**Total number of states \ provinces: **35**

importation from Bihar in 2008. In Bihar, endemic transmission continued along several chains of transmission. Sporadic importation into other states in India was also observed, but with limited or no continued transmission. However, more than one instance of continued subsequent transmission in other states was observed, including detection of virus in a sewage sample from Egypt. By 2010, the number of WPV1 cases was reduced considerably. All cases in four different states, and including two instances of international spread to Nepal were related to virus last observed in Bihar in 2009. In several instances, limited local transmission was observed following these importations. The WPV3 virus in India during 2009 represented a very large outbreak, mostly confined to the two northern states of Uttar Pradesh and Bihar. The viruses observed in 2009 represented continued transmission within seven related genetic clusters that had evolved from a single 2008 genetic cluster primarily in two distinct geographic foci. In Uttar Pradesh, the virus represented continued circulation following the large outbreak following importation from Bihar in 2008. In Bihar, endemic transmission continued along several chains of transmission. Sporadic importation into other states in India was also observed, but with limited or no continued transmission. By 2010, the number of WPV3 cases was reduced considerably and viruses from only four genetic clusters have been observed. These included both continued transmission in UP and Bihar, but also a new importation event and continued transmission in a neighboring state. Based upon the close genetic linkage among many of the virus isolates, it is unlikely that there are significant missed chains of transmission in much of India. However, a few isolates have less genetic linkage than expected, which is an indication that surveillance may have gaps at the sub-national level, with particular concern in parts of Bihar.

**Data Completeness**

Percent of NPAFP cases with unknown age

**0%**

Percent of 6-35 month old NPAFP cases with unknown dose history

**1.6%**

# Kazakhstan

Total number of states \ provinces: 16

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 98% Pol3 99%

### Non Polio AFP Profile

Percent 0-dose (national) <b>0%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted % within acceptable range
Percent 4+ doses (national) <b>13%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted % within acceptable range

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-tOPV	06-Sep-10				

## Surveillance

### Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	0	0	1	1	12-Aug-10

### Non Polio AFP data

NPAFP rate (national) <b>3.9</b>	Percent states with NPAFP rate >= 2 Non-adjusted <b>100% (15 of 15)</b> % within acceptable range <b>100% (15 of 15)</b>
% adequate stools (nat.) <b>99.2%</b>	Percent states with adequate stool proportion >= 80% Non-adjusted <b>100% (16 of 16)</b> % within acceptable range <b>100% (16 of 16)</b>

### Poliovirus History

Kazakhstan was polio-free until a single reported case in 2010 that represents an importation from the outbreak in Tajikistan. With only a single case in Kazakhstan and incomplete data from Tajikistan there is insufficient virologic data to inform an assessment of surveillance sensitivity in Kazakhstan.

### Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

0%

# Kenya

Total number of states \ provinces: 8

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 **75%** Pol3 **71%**

### Non Polio AFP Profile

<i>Percent 0-dose (national)</i> <b>5%</b>	<i>Percent states with &lt; 10% 0-dose NPAFP children</i> Non-adjusted <b>100% (5 of 5)</b> % within acceptable range <b>100% (5 of 5)</b>
<i>Percent 4+ doses (national)</i> <b>31.9%</b>	<i>Percent states with &gt; 80% 4+dose NPAFP children</i> Non-adjusted <b>0% (0 of 5)</b> % within acceptable range <b>0% (0 of 5)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

<i>Campaign type</i>  (mixed rounds abbreviated as: t, b, 1, 3)	<i>Start date</i>	<i>National indicator</i>		<i>Sub national indicator</i>	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house

## Surveillance

### Polio Cases (W1, W3, and VDPVs)

<i>Serotype</i>	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	19	3			30-Jul-09

### Non Polio AFP data

<i>NPAFP rate (national)</i> <b>2.4</b>	<i>Percent states with NPAFP rate &gt;= 2</i> Non-adjusted <b>87.5% (7 of 8)</b> % within acceptable range <b>100% (8 of 8)</b>
<i>% adequate stools (nat.)</i> <b>86.9%</b>	<i>Percent states with adequate stool proportion &gt;= 80%</i> Non-adjusted <b>87.5% (7 of 8)</b> % within acceptable range <b>100% (8 of 8)</b>

### Poliovirus History

The WPV1 viruses in Kenya during 2009 represented a focal outbreak resulting from an importation in early 2009 from southern Sudan. Only one genetic cluster was observed. The 2009 outbreak was centered in northern Kenya and included significant local transmission. There was little indication of missed chains of transmission based upon the close genetic linkage among isolates in 2009. The single case in Uganda in 2010 is most closely linked to a 2009 Kenya virus with a significant genetic gap from 2009 isolates. As a single case this is insufficient to inform an assessment of surveillance sensitivity in Kenya in 2010.

### Data Completeness

Percent of NPAFP cases with unknown age	<b>0.2%</b>
Percent of 6-35 month old NPAFP cases with unknown dose history	<b>16%</b>

**Liberia**

Total number of states \ provinces: 15

**Immunization**

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 64% Pol3 74%

**Non Polio AFP Profile**

Percent 0-dose (national) <b>4.3%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted % within acceptable range
Percent 4+ doses (national) <b>26.1%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted % within acceptable range

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	05-Mar-10	2	10.7	93% (14 of 15)	73% (11 of 15)
NID-mOPV1	23-Apr-10	4.1	5.3	93% (14 of 15)	87% (13 of 15)
NID-mOPV1	28-May-10	3	3.6	100% (15 of 15)	93% (14 of 15)
NID-mOPV1	25-Jun-10	5	5.2	93% (14 of 15)	100% (15 of 15)

**Surveillance**

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	11	6	2	2	08-Sep-10

Non Polio AFP data

NPAFP rate (national) <b>3.2</b>	Percent states with NPAFP rate >= 2 Non-adjusted <b>60% (3 of 5)</b> % within acceptable range <b>100% (5 of 5)</b>
% adequate stools (nat.) <b>96.4%</b>	Percent states with adequate stool proportion >= 80% Non-adjusted <b>85.7% (12 of 14)</b> % within acceptable range <b>100% (14 of 14)</b>

**Poliovirus History**

The WPV1 viruses in Liberia during 2009 represented a moderate outbreak resulting from importation in early 2009 from Ivory Coast. Only one genetic cluster was observed. The 2009 outbreak was distributed in several parts of the country and included moderate local transmission. The two cases in 2010 represented a new importation event likely from Guinea and not continued circulation from 2009. There was little indication of missed chains of transmission in 2009 based upon the close genetic linkage among most of the isolates, although the 2010 isolates have less genetic linkage than expected both between them and with potential sources in Guinea.

**Data Completeness**

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

5%

## Mali

Total number of states \ provinces: 9

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 **74%** Pol3 **74%**

## Non Polio AFP Profile

<i>Percent 0-dose (national)</i> <b>1.4%</b>	<i>Percent states with &lt; 10% 0-dose NPAFP children</i> Non-adjusted <b>100% (2 of 2)</b> % within acceptable range <b>100% (2 of 2)</b>
<i>Percent 4+ doses (national)</i> <b>64.3%</b>	<i>Percent states with &gt; 80% 4+dose NPAFP children</i> Non-adjusted <b>0% (0 of 2)</b> % within acceptable range <b>0% (0 of 2)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

<i>Campaign type</i>  (mixed rounds abbreviated as: t, b, 1, 3)	<i>Start date</i>	<i>National indicator</i>		<i>Sub national indicator</i>	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	06-Mar-10	11.2		33% (3 of 9)	
SNID-mOPV1	26-Mar-10	2.9	10.1	100% (1 of 1)	0% (0 of 1)
NID-mOPV1	24-Apr-10	5.9	11	89% (8 of 9)	44% (4 of 9)
NID-mOPV1	28-May-10	5.7	7.5	83% (5 of 6)	83% (5 of 6)
SNID-mOPV1	25-Jun-10	5.7	7.6	71% (5 of 7)	57% (4 of 7)
M.U.-mOPV1	30-Jul-10				

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	2	2	3	3	01-May-10
W3	0	0	1	1	17-Sep-10

## Non Polio AFP data

<i>NPAFP rate (national)</i> <b>3.1</b>	<i>Percent states with NPAFP rate <math>\geq 2</math></i> Non-adjusted <b>100% (8 of 8)</b> % within acceptable range <b>100% (8 of 8)</b>
<i>% adequate stools (nat.)</i> <b>92%</b>	<i>Percent states with adequate stool proportion <math>\geq 80\%</math></i> Non-adjusted <b>100% (9 of 9)</b> % within acceptable range <b>100% (9 of 9)</b>

## Poliovirus History

The two WPV1 viruses in Mali during 2009 represented continued circulation from an importation in 2008 and an additional importation late in 2009, probably from Guinea. These two viruses are from two genetic clusters. The three viruses detected in 2010 represent a single case from continued transmission from the importation late in 2009, as well as two independent importations from Burkina Faso and Mauritania. The WPV3 in 2010 represents a new importation event most closely linked to a Niger virus. There is little evidence of significant local transmission. There was little indication of missed chains of transmission based upon the close genetic linkage among most isolates, although one of the 2010 isolates had less genetic linkage than expected. Although having less genetic linkage than expected, as a single case, the WPV3 virus is insufficient to inform an assessment of surveillance sensitivity.

## Data Completeness

Percent of NPAFP cases with unknown age	<b>0.5%</b>
Percent of 6-35 month old NPAFP cases with unknown dose history	<b>5.2%</b>



# Mauritania

Total number of states \ provinces: 13

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 64% Pol3 63%

### Non Polio AFP Profile

Percent 0-dose (national) <b>8.3%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted % within acceptable range
Percent 4+ doses (national) <b>61.1%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted % within acceptable range

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	16-Feb-10	34.6		8% (1 of 13)	
NID-mOPV1	06-Mar-10	26.8	38.3	23% (3 of 13)	0% (0 of 2)
NID-mOPV1	27-Mar-10	23.7	24.9	54% (7 of 13)	8% (1 of 13)
NID-mOPV1	24-Apr-10	13.4	13.8	46% (6 of 13)	46% (6 of 13)
NID-mOPV1	28-May-10	12.6	12.3	46% (6 of 13)	31% (4 of 13)
NID-mOPV1	25-Jun-10	5.2	5.7	92% (12 of 13)	85% (11 of 13)
M.U.-mOPV1	30-Jul-10				

## Surveillance

Polio Cases (W1, W3, and VDPVs)

<i>Serotype</i>	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	13	12	5	4	28-Apr-10

### Non Polio AFP data

NPAFP rate (national) <b>5.8</b>	Percent states with NPAFP rate >= 2 Non-adjusted <b>71.4% (5 of 7)</b> % within acceptable range <b>85.7% (6 of 7)</b>
% adequate stools (nat.) <b>94.7%</b>	Percent states with adequate stool proportion >= 80% Non-adjusted <b>91.7% (11 of 12)</b> % within acceptable range <b>100% (12 of 12)</b>

### Poliovirus History

The WPV1 viruses in Mauritania during 2009 represented a moderate outbreak resulting from importation at an uncertain time before the middle of 2009, probably from Ivory Coast. Only one genetic cluster was observed. The 2009 outbreak was widely distributed within the country and included moderate local transmission. The cases in 2010 represented continued circulation from 2009 and not a new importation. There was little indication of missed chains of transmission based upon the close genetic linkage among isolates.

### Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

3%

# Nepal

Total number of states \ provinces: 5

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 82% Pol3 82%

### Non Polio AFP Profile

Percent 0-dose (national) <b>0%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>100% (4 of 4)</b> % within acceptable range <b>100% (4 of 4)</b>
Percent 4+ doses (national) <b>89.2%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>100% (4 of 4)</b> % within acceptable range <b>100% (4 of 4)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-bOPV	10-Apr-10				
NID-bOPV	15-May-10				
Mop-up-mOPV1	19-Jun-10	12	30.2	60% (3 of 5)	0% (0 of 5)
Mop-up-mOPV1	17-Jul-10	10.1	16.7	50% (1 of 2)	0% (0 of 2)
Mop-up-mOPV1	31-Jul-10	7.4	7.9	100% (2 of 2)	100% (2 of 2)
Mop-up-mOPV1	14-Aug-10	10.4	9.2	50% (1 of 2)	50% (1 of 2)
Mop-up-mOPV1	18-Sep-10	5.6	7.8	100% (2 of 2)	50% (1 of 2)

## Surveillance

Polio Cases (W1, W3, and VDPVs)

<i>Serotype</i>	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	0	0	6	2	30-Aug-10

### Non Polio AFP data

NPAFP rate (national) <b>5.8</b>	Percent states with NPAFP rate >= 2 Non-adjusted <b>100% (5 of 5)</b> % within acceptable range <b>100% (5 of 5)</b>
% adequate stools (nat.) <b>89.8%</b>	Percent states with adequate stool proportion >= 80% Non-adjusted <b>80% (4 of 5)</b> % within acceptable range <b>100% (5 of 5)</b>

### Poliovirus History

The WPV1 viruses in Nepal during 2010 represented two importation events from Bihar in India. The viruses were from a single genetic cluster related to circulation in Bihar in 2009. One importation resulted in only a single virus detected in early 2010, while the second importation resulted in five cases and indicate local transmission. There was little indication of missed chains of transmission based upon the close genetic linkage among isolates in the second importation event, although the early 2010 isolate had less genetic linkage than expected.

### Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

0.6%

## Niger

Total number of states \ provinces: 8

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 **70%** Pol3 **71%**

## Non Polio AFP Profile

Percent 0-dose (national) <b>1.9%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>100% (5 of 5)</b> % within acceptable range <b>100% (5 of 5)</b>
Percent 4+ doses (national) <b>62.6%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>0% (0 of 5)</b> % within acceptable range <b>20% (1 of 5)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-bOPV	26-Mar-10	4	7.7	100% (8 of 8)	67% (4 of 6)
NID-mOPV1	24-Apr-10	3	5	100% (8 of 8)	100% (8 of 8)
SNID-mOPV3	28-May-10	4	9.1	100% (2 of 2)	50% (1 of 2)

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	1	1			28-May-09
W3	14	9	2	1	01-Apr-10

## Non Polio AFP data

NPAFP rate (national) <b>5.2</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>100% (8 of 8)</b> % within acceptable range <b>100% (8 of 8)</b>
% adequate stools (nat.) <b>73.2%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>37.5% (3 of 8)</b> % within acceptable range <b>62.5% (5 of 8)</b>

## Poliovirus History

The WPV3 viruses in Niger during 2009 represent continued circulation from an importation in 2008 and at least seven additional importations in 2009, all likely from Nigeria, with one possible importation from Chad. These WPV3 viruses are from seven distinct genetic clusters. The WPV3 detected in 2010 represents a new importation from Nigeria. There is little evidence of significant local transmission, other than the one 2008/2009 outbreak. The WPV1 in 2009 represented a single importation event. There was little indication of missed chains of transmission based upon the close genetic linkage among isolates, although the one 2009 WPV1 and the one 2010 WPV3 isolates had significantly less genetic linkage than expected and the WPV3 virus in Mali with less genetic linkage than expected is related to the WPV3 importation to Niger in 2010, both of which are related to virus from Northern Nigeria in 2010.

## Data Completeness

Percent of NPAFP cases with unknown age	<b>0.3%</b>
Percent of 6-35 month old NPAFP cases with unknown dose history	<b>4.2%</b>

## Nigeria

Total number of states \ provinces: 37

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) **DTP3 42% Pol3 54%**

## Non Polio AFP Profile

<i>Percent 0-dose (national)</i> <b>3.4%</b>	<i>Percent states with &lt; 10% 0-dose NPAFP children</i> Non-adjusted <b>94.6% (35 of 37)</b> % within acceptable range <b>97.3% (36 of 37)</b>
<i>Percent 4+ doses (national)</i> <b>65.3%</b>	<i>Percent states with &gt; 80% 4+dose NPAFP children</i> Non-adjusted <b>37.8% (14 of 37)</b> % within acceptable range <b>43.2% (16 of 37)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

<i>Campaign type</i>  (mixed rounds abbreviated as: t, b, 1, 3)	<i>Start date</i>	<i>National indicator</i>		<i>Sub national indicator</i>	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-bOPV	30-Jan-10				
NID-tOPV	06-Mar-10				
SNID-bOPV,1,3	24-Apr-10				
SNID-bOPV, 3	05-Jun-10				
SNID-bOPV	18-Jun-10				
M.U.-mOPV1	15-Jul-10				
SNID-bOPV,3,t	05-Aug-10				
SNID-bOPV	18-Sep-10				

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	75	53	5	5	27-Sep-10
W3	313	159	4	4	05-Aug-10
cVDPV2	154	98	18	17	10-Sep-10

Non Polio AFP data

<i>NPAFP rate (national)</i> <b>8.9</b>	<i>Percent states with NPAFP rate &gt;= 2</i> Non-adjusted <b>100% (37 of 37)</b> % within acceptable range <b>100% (37 of 37)</b>
<i>% adequate stools (nat.)</i> <b>93.6%</b>	<i>Percent states with adequate stool proportion &gt;= 80%</i> Non-adjusted <b>100% (37 of 37)</b> % within acceptable range <b>100% (37 of 37)</b>

## Poliovirus History

The WPV1 virus in Nigeria during 2009 and 2010 represents the continued transmission from the very large outbreak in 2008. The genetic diversity of the WPV1 virus chains of transmission in 2008 was the greatest in the world and represented 31 distinct genetic clusters. In 2009, the number of cases was significantly reduced and 18 of the 2008 genetic clusters were still observed. However, only four genetic clusters accounted for nearly two-thirds of the cases, and eight genetic clusters only had a single virus isolate and four more had only two isolates. Despite the small number of cases in the last six months of 2009 (six cases from four genetic clusters), the five viruses from 2010 as well as three from the last half of 2009 had much less genetic linkage than expected, and both genetic clusters observed in 2010 were not observed in the last half of 2009. The WPV3 virus in Nigeria during 2009 represents a large, widespread outbreak. The genetic diversity of the WPV3 virus chains of transmission in 2009 was the greatest in the world and represented 20 distinct genetic clusters. Seven of the 2008 genetic clusters were not observed in 2009 or 2010. However, at least eight of these 2009 genetic clusters were not detected in 2008. Only three genetic clusters accounted for nearly two-thirds of the cases. In the latter half of 2009, the number of cases was significantly reduced, but still represented nine genetic clusters and only one of the two observed in 2010. All four viruses from 2010 as well as 7 of 24 from the last half of 2009 had much less genetic linkage than expected. Based upon the close genetic linkage among many of the virus isolates in 2009, it is unlikely that there are significant missed chains of transmission in much of Nigeria. However, the significant proportion of isolates with much less genetic linkage

**Nigeria**

Total number of states \ provinces: **37**

than expected during the last year indicates the potential for significant surveillance gaps at the sub-national level.

**Data Completeness**

Percent of NPAFP cases with unknown age	<b>0%</b>
Percent of 6-35 month old NPAFP cases with unknown dose history	<b>0.9%</b>

## Pakistan

Total number of states \ provinces: 7

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 85% Pol3 85%

## Non Polio AFP Profile

Percent 0-dose (national) <b>2%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>100% (5 of 5)</b> % within acceptable range <b>100% (5 of 5)</b>
Percent 4+ doses (national) <b>94.7%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>100% (5 of 5)</b> % within acceptable range <b>100% (5 of 5)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
SNID-mOPV1,3	18-Jan-10				
NID-bOPV	15-Feb-10				
SNID-bOPV	15-Mar-10				
NID-tOPV	26-Apr-10				
SNID-bOPV	24-May-10				
SNID-mOPV1	14-Jun-10				
SNID-mOPV1	17-Jun-10				
NID-bOPV	12-Jul-10				
M.U.-bOPV	05-Aug-10				
M.U.-tOPV	17-Aug-10				
CHD-mOPV1	15-Sep-10				
SNID-bOPV,t	27-Sep-10				

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	60	26	70	24	29-Sep-10
W1W3	1	1			29-Jul-09
W3	28	12	21	11	20-Sep-10

Non Polio AFP data

NPAFP rate (national) <b>7.2</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>100% (7 of 7)</b> % within acceptable range <b>100% (7 of 7)</b>
% adequate stools (nat.) <b>90.1%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>100% (7 of 7)</b> % within acceptable range <b>100% (7 of 7)</b>

## Poliovirus History

The WPV1 viruses in Pakistan during 2009 and 2010 represent a complex pattern of endemic transmission. In 2009, the viruses were from four genetic clusters, all of which were also found in Afghanistan. However, the various chains of transmission were often distinct from those in Afghanistan. More than half the WPV1 cases were from a single genetic cluster with multiple chains of transmission that correlated with at least four geographic areas in all four provinces. In all instances, there is evidence of local transmission. In the case of Baluchistan, there is also evidence of cross-border transmission in addition to local circulation. In 2010, the viruses were from three genetic clusters, with almost all of the isolates from two clusters, one with mostly local transmission in NWFP and the second with transmission in the south. The few viruses from Punjab, however, represented residual circulation from two genetic clusters seen in 2009. The WPV3 virus in Pakistan during 2009 and 2010 represent a somewhat improving situation of endemic transmission. In 2009, the viruses were from three genetic clusters, one of which was also found in

**Pakistan**

Total number of states \ provinces: 7

Afghanistan. However, the chains of transmission for this cluster were often distinct from those in Afghanistan. More than half the WPV1 cases were from a single genetic cluster with multiple chains of transmission correlated with at least three geographic areas in three provinces. The remaining two clusters were largely focused in NWFP. In all instances, there is evidence of local transmission with the exception of three isolates in Baluchistan that may represent cross-border transmission. In 2010, the viruses were only from a single genetic cluster with mostly local transmission in NWFP. Based upon the close genetic linkage among many of the virus isolates in early 2009, it is unlikely that there are significant missed chains of transmission in some parts of Pakistan. However, the significant proportion of isolates with much less genetic linkage than expected during the last year indicates the potential for surveillance gaps at the sub-national level.

**Data Completeness**

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

0%

## Russian Federation

Total number of states \ provinces: 89

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 98% Pol3 98%

## Non Polio AFP Profile

<i>Percent 0-dose (national)</i> <b>6.8%</b>	<i>Percent states with &lt; 10% 0-dose NPAFP children</i> Non-adjusted <b>100% (2 of 2)</b> % within acceptable range <b>100% (2 of 2)</b>
<i>Percent 4+ doses (national)</i> <b>51.9%</b>	<i>Percent states with &gt; 80% 4+dose NPAFP children</i> Non-adjusted <b>0% (0 of 2)</b> % within acceptable range <b>0% (0 of 2)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

<i>Campaign type</i>  (mixed rounds abbreviated as: t, b, 1, 3)	<i>Start date</i>	<i>National indicator</i>		<i>Sub national indicator</i>	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
M.U.-tOPV	01-Sep-10				

## Surveillance

Polio Cases (W1, W3, and VDPVs)

<i>Serotype</i>	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	0	0	14	8	25-Sep-10

Non Polio AFP data

<i>NPAFP rate (national)</i> <b>2.1</b>	<i>Percent states with NPAFP rate &gt;= 2</i> Non-adjusted <b>44.1% (30 of 68)</b> % within acceptable range <b>75% (51 of 68)</b>
<i>% adequate stools (nat.)</i> <b>94.9%</b>	<i>Percent states with adequate stool proportion &gt;= 80%</i> Non-adjusted <b>92.2% (71 of 77)</b> % within acceptable range <b>100% (77 of 77)</b>

## Poliovirus History

In 2010, the 14 reported cases are the result of at least 5 importation events, directly or indirectly, from the outbreak viruses of Tajikistan. In several of the importations, there is evidence of limited local transmission and at least one instance of long distance onward transmission within the Russian Federation. There was little indication of missed chains of transmission based upon the close genetic linkage among isolates within the country.

## Data Completeness

Percent of NPAFP cases with unknown age	<b>0%</b>
Percent of 6-35 month old NPAFP cases with unknown dose history	<b>3.1%</b>



# Senegal

Total number of states \ provinces: 11

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 86% Pol3 83%

### Non Polio AFP Profile

Percent 0-dose (national) <b>7.9%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>50% (2 of 4)</b> % within acceptable range <b>100% (4 of 4)</b>
Percent 4+ doses (national) <b>42.4%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>0% (0 of 4)</b> % within acceptable range <b>0% (0 of 4)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
SNID-mOPV1	06-Feb-10	11.6	18.1	45% (5 of 11)	27% (3 of 11)
NID-mOPV1	06-Mar-10				
NID-mOPV1	27-Mar-10	6.7	8.6	85% (11 of 13)	54% (7 of 13)
NID-mOPV1	24-Apr-10	6	7.8	77% (10 of 13)	69% (9 of 13)
NID-mOPV1	29-May-10	5	8.3	92% (12 of 13)	85% (11 of 13)
NID-mOPV1	26-Jun-10	4.7	9.6	85% (11 of 13)	62% (8 of 13)

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	0	0	18	11	30-Apr-10

### Non Polio AFP data

NPAFP rate (national) <b>6.3</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>100% (11 of 11)</b> % within acceptable range <b>100% (11 of 11)</b>
% adequate stools (nat.) <b>63.8%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>27.3% (3 of 11)</b> % within acceptable range <b>63.6% (7 of 11)</b>

### Poliovirus History

The WPV1 viruses in Senegal during 2010 represented a moderate outbreak resulting from three importations in 2010 from Guinea and Mauritania. Only one genetic cluster was observed. The 2010 outbreak was distributed mostly in the western part of the country and included moderate local transmission. All three importation events date to early 2010, or earlier. Two of the importations were most likely from Guinea, while one was probably from Mauritania. There was little indication of missed chains of transmission in 2010 in Senegal based upon the close genetic linkage among isolates, although the dates and sources for the importations indicates missed virus transmission somewhere in late 2009 because the initial isolates had less genetic linkage than expected.

### Data Completeness

Percent of NPAFP cases with unknown age

0.3%

Percent of 6-35 month old NPAFP cases with unknown dose history

2.8%

## Sierra Leone

Total number of states \ provinces: 4

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 **75%** Pol3 **74%**

## Non Polio AFP Profile

Percent 0-dose (national) <b>0.7%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>100% (3 of 3)</b> % within acceptable range <b>100% (3 of 3)</b>
Percent 4+ doses (national) <b>39%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>0% (0 of 3)</b> % within acceptable range <b>0% (0 of 3)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	06-Mar-10	11.4	17.3	25% (1 of 4)	0% (0 of 4)
NID-mOPV1	26-Mar-10	9.4	13.1	50% (2 of 4)	0% (0 of 4)
NID-mOPV1	07-May-10	10.5	14	50% (2 of 4)	0% (0 of 4)
NID-mOPV1	28-May-10	12	14.9	25% (1 of 4)	0% (0 of 4)

## Surveillance

Polio Cases (W1, W3, and VDPVs)

<i>Serotype</i>	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	11	5	1	1	28-Feb-10

## Non Polio AFP data

NPAFP rate (national) <b>7.5</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>100% (4 of 4)</b> % within acceptable range <b>100% (4 of 4)</b>
% adequate stools (nat.) <b>81.4%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>50% (2 of 4)</b> % within acceptable range <b>100% (4 of 4)</b>

## Poliovirus History

The WPV1 viruses in Sierra Leone during 2009 represented a moderate outbreak resulting from importation in the middle of 2009 from Guinea. Only one genetic cluster was observed. The 2009 outbreak was distributed mostly in the western part of the country and included moderate local transmission. The case in 2010 represented continued circulation from 2009 and not a new importation. There was little indication of missed chains of transmission in 2009 based upon the close genetic linkage among isolates, although the 2010 isolate had less genetic linkage than expected.

## Data Completeness

Percent of NPAFP cases with unknown age

**0%**

Percent of 6-35 month old NPAFP cases with unknown dose history

**0.9%**

## Somalia

Total number of states \ provinces: 19

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 31% Pol3 28%

## Non Polio AFP Profile

Percent 0-dose (national) <b>11.1%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted % within acceptable range
Percent 4+ doses (national) <b>63.6%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted % within acceptable range

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
CHD-bOPV	01-May-10				
CHD-bOPV	01-Jun-10				
CHD-tOPV	14-Jul-10				
SNID-tOPV	18-Jul-10				
SNID-tOPV	24-Jul-10				
SNID-tOPV	01-Sep-10				
SNID-tOPV	19-Sep-10				
CHD-tOPV	25-Sep-10				

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
cVDPV2	4	4	2	2	18-Aug-10

## Non Polio AFP data

NPAFP rate (national) <b>3.5</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>87.5% (14 of 16)</b> % within acceptable range <b>100% (16 of 16)</b>
% adequate stools (nat.) <b>98.9%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>100% (19 of 19)</b> % within acceptable range <b>100% (19 of 19)</b>

## Poliovirus History

## Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

0%

## Sudan

Total number of states \ provinces: 25

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates) DTP3 84% Pol3 84%

## Non Polio AFP Profile

Percent 0-dose (national) <b>3.7%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>80% (4 of 5)</b> % within acceptable range <b>100% (5 of 5)</b>
Percent 4+ doses (national) <b>79.7%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>40% (2 of 5)</b> % within acceptable range <b>80% (4 of 5)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	17-Feb-10				
NID-bOPV	22-Feb-10				
NID-bOPV	29-Mar-10				
SNID-tOPV	21-Jun-10				

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	45	24			27-Jun-09

## Non Polio AFP data

NPAFP rate (national) <b>3.6</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>100% (25 of 25)</b> % within acceptable range <b>100% (25 of 25)</b>
% adequate stools (nat.) <b>95.1%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>100% (25 of 25)</b> % within acceptable range <b>100% (25 of 25)</b>

## Poliovirus History

The WPV1 viruses in Sudan during 2009 represented continuation of a large outbreak that began in 2008. Only one genetic cluster was observed. The 2009 outbreak was widely distributed mostly in the southern part of the country and included several cases in the northeast of the country. The outbreak represented continued circulation in the region dating from 2004 and not a new importation into the region. Because of the lack of close genetic linkage, it is not possible to know where the virus was between 2004 and 2008. There was little indication of missed chains of transmission in 2009 based upon the close genetic linkage among isolates.

## Data Completeness

Percent of NPAFP cases with unknown age	<b>0.1%</b>
Percent of 6-35 month old NPAFP cases with unknown dose history	<b>0%</b>

# Tajikistan

Total number of states \ provinces: 6

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 93% Pol3 93%

### Non Polio AFP Profile

Percent 0-dose (national) <b>n/a</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted <b>100% (3 of 3)</b> % within acceptable range <b>100% (3 of 3)</b>
Percent 4+ doses (national) <b>29.5%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted <b>0% (0 of 3)</b> % within acceptable range <b>0% (0 of 3)</b>

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	04-May-10				
NID-mOPV1	18-May-10	0.5	0.2	100% (5 of 5)	100% (3 of 3)
NID-mOPV1	01-Jun-10	2.5	0	100% (5 of 5)	100% (2 of 2)
NID-mOPV1	15-Jun-10	3.6	0	100% (5 of 5)	100% (2 of 2)
M.U.-mOPV1	13-Sep-10				

## Surveillance

### Polio Cases (W1, W3, and VDPVs)

<i>Serotype</i>	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	0	0	458	35	04-Jul-10

### Non Polio AFP data

NPAFP rate (national) <b>6.8</b>	Percent states with NPAFP rate >= 2 Non-adjusted <b>80% (4 of 5)</b> % within acceptable range <b>100% (5 of 5)</b>
% adequate stools (nat.) <b>86.4%</b>	Percent states with adequate stool proportion >= 80% Non-adjusted <b>83.3% (5 of 6)</b> % within acceptable range <b>83.3% (5 of 6)</b>

### Poliovirus History

The WPV1 viruses in Tajikistan during 2010 represented a very large outbreak resulting from importation from India. Only one genetic cluster was observed. The outbreak was widely distributed in several parts of the country, with intense transmission particularly in western parts of the country. The virus was related to viruses circulating in western Uttar Pradesh, India during late 2009. Incomplete sequence data does not allow an assessment of the degree of genetic linkage among the isolates within Tajikistan and therefore, no inference about surveillance sensitivity can be made.

### Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

62.8%

# Togo

Total number of states \ provinces: 6

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 89% Pol3 89%

### Non Polio AFP Profile

Percent 0-dose (national) <b>2.7%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted % within acceptable range
Percent 4+ doses (national) <b>67.6%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted % within acceptable range

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-mOPV1	01-Apr-10	4.4	10.8	100% (6 of 6)	67% (4 of 6)
NID-mOPV1	14-May-10	4	10.4	100% (6 of 6)	33% (2 of 6)

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	6	5			28-Mar-09

Non Polio AFP data

NPAFP rate (national) <b>2.8</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>83.3% (5 of 6)</b> % within acceptable range <b>100% (6 of 6)</b>
% adequate stools (nat.) <b>88.9%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>100% (6 of 6)</b> % within acceptable range <b>100% (6 of 6)</b>

## Poliovirus History

The WPV1 viruses in Togo during 2009 represented at least three importations in 2008 and 2009. The viruses are from two genetic clusters, both related to the larger West Africa outbreak that began in 2008. One cluster represented the five cases in the north, while a single isolate of the other cluster was detected in the central part of the country related to the outbreak in Benin. The northern transmission is likely the result of two importations, one from Ghana and the other from Benin, with only limited local transmission. Based upon the close genetic linkage among most of the virus isolates, it is unlikely that there are significant missed chains of transmission, however, two isolates have less genetic linkage than expected, which might be an indication that surveillance may have gaps at the sub-national level.

## Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

21.9%

# Turkmenistan

Total number of states \ provinces: 6

## Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 96% Pol3 97%

### Non Polio AFP Profile

Percent 0-dose (national) <b>0%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted % within acceptable range
Percent 4+ doses (national) <b>82.4%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted % within acceptable range

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house
NID-tOPV	12-Jul-10				
NID-mOPV1	26-Aug-10				
NID-mOPV1	20-Sep-10				

## Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	0	0	3	2	28-Jun-10

Non Polio AFP data

NPAFP rate (national) <b>3.6</b>	Percent states with NPAFP rate >= 2 Non-adjusted <b>83.3% (5 of 6)</b> % within acceptable range <b>100% (6 of 6)</b>
% adequate stools (nat.) <b>98.2%</b>	Percent states with adequate stool proportion >= 80% Non-adjusted <b>100% (6 of 6)</b> % within acceptable range <b>100% (6 of 6)</b>

### Poliovirus History

Turkmenistan was polio-free until three cases were reported in 2010 that represents two importation events from the outbreak in Tajikistan. With only a single case from one importation and only two cases from the other and incomplete data from Tajikistan, there is insufficient virologic data to inform an assessment of surveillance sensitivity in Turkmenistan.

### Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

0%

## Uganda

Total number of states \ provinces: 79

### Immunization

Immunization coverage (2009 nat. WHO-UNICEF estimates)

DTP3 64% Pol3 59%

#### Non Polio AFP Profile

Percent 0-dose (national) <b>8.9%</b>	Percent states with < 10% 0-dose NPAFP children Non-adjusted % within acceptable range
Percent 4+ doses (national) <b>40.9%</b>	Percent states with > 80% 4+dose NPAFP children Non-adjusted % within acceptable range

Independent Monitoring (IM data were not collected, or were not available for all rounds shown)

Campaign type  (mixed rounds abbreviated as: t, b, 1, 3)	Start date	National indicator		Sub national indicator	
		Percent missed children (finger marking)		Percent of states with < 10% missed children	
		House to House (%)	Out of house (%)	House to House	Out of house

### Surveillance

Polio Cases (W1, W3, and VDPVs)

Serotype	Count				Date of onset for last case
	2009 (Jan-Dec)		2010 (Jan-Sept)		
	cases	districts	cases	districts	
W1	8	2	1	1	28-Sep-10

Non Polio AFP data

NPAFP rate (national) <b>2.8</b>	Percent states with NPAFP rate $\geq 2$ Non-adjusted <b>63.1% (41 of 65)</b> % within acceptable range <b>84.6% (55 of 65)</b>
% adequate stools (nat.) <b>88.1%</b>	Percent states with adequate stool proportion $\geq 80\%$ Non-adjusted <b>78.4% (58 of 74)</b> % within acceptable range <b>93.2% (69 of 74)</b>

#### Poliovirus History

The WPV1 viruses in Uganda during 2009 represented a focal outbreak resulting from importation in early 2009 from southern Sudan. Only one genetic cluster was observed. The 2009 outbreak was centered in northern Uganda and included limited local transmission. There was little indication of missed chains of transmission based upon the close genetic linkage among isolates in 2009. The single case in Uganda in 2010 is most closely linked to a 2009 Kenya virus, however, with a significant genetic gap from 2009 isolates. As a single case this is insufficient to inform an assessment of surveillance sensitivity in Uganda in 2010.

#### Data Completeness

Percent of NPAFP cases with unknown age

0%

Percent of 6-35 month old NPAFP cases with unknown dose history

3.6%